Triggers for Commissioning Level 1 and Level 2 – 36x36
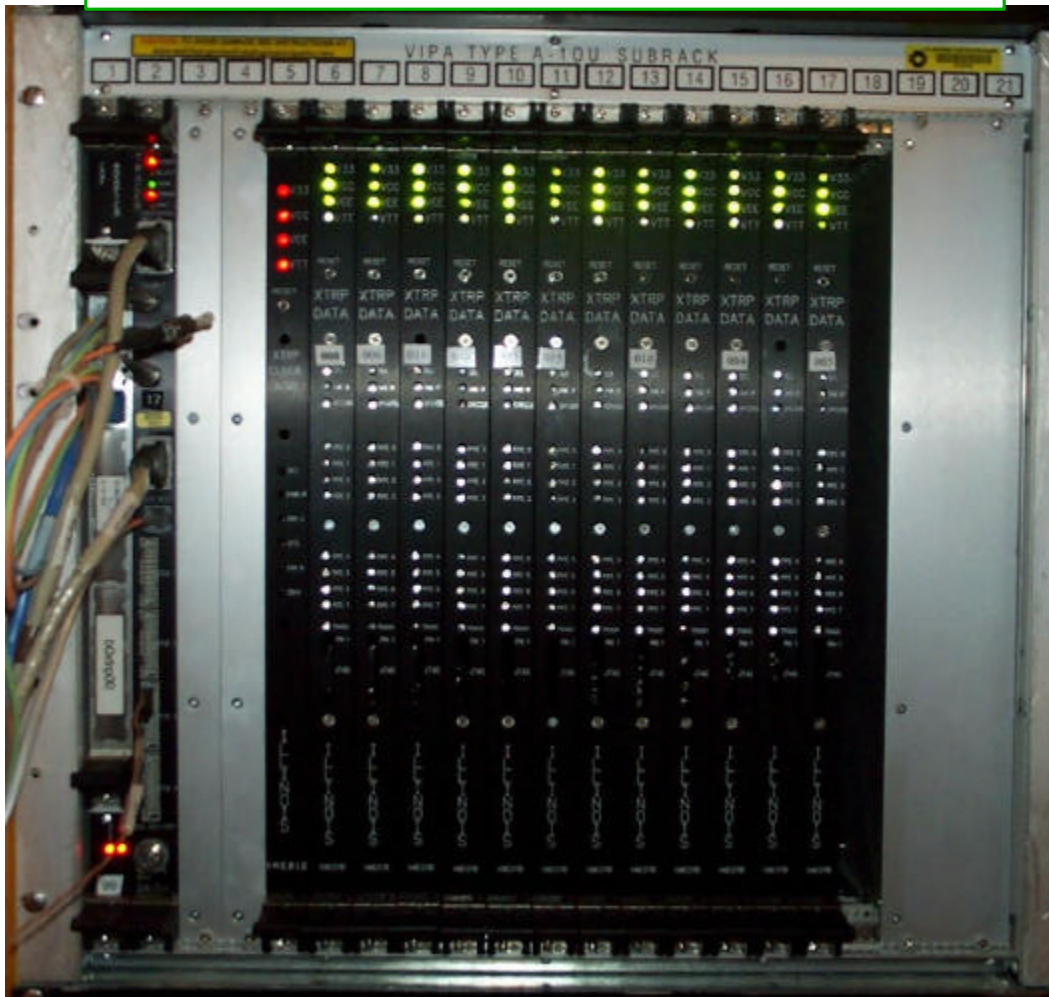
- Completing L1 work:
  - ✓ Full XTRP coverage
  - ✓ Electron Trigger
  - ✓ Full FRED functionality
  - ➤ Muon systems beyond CMU –
    - CMP, CSP, CMX (~April 20)
    - CSX, BMU, HADTDC
  - ➤ Track Trigger board for XTRP (~May 1)
- Complete L2 Work
  - ➤ Cluster finder operation
  - ➤ Full SVT operation using XFT tracks
  - ➤ XFT/SVT Tracks into L2
  - ➤ L2 operation
- Timing
  - ✓ Will need to confirm timing of Calorimeter/Track/Muon
  - ✓ Establish timing for Electron
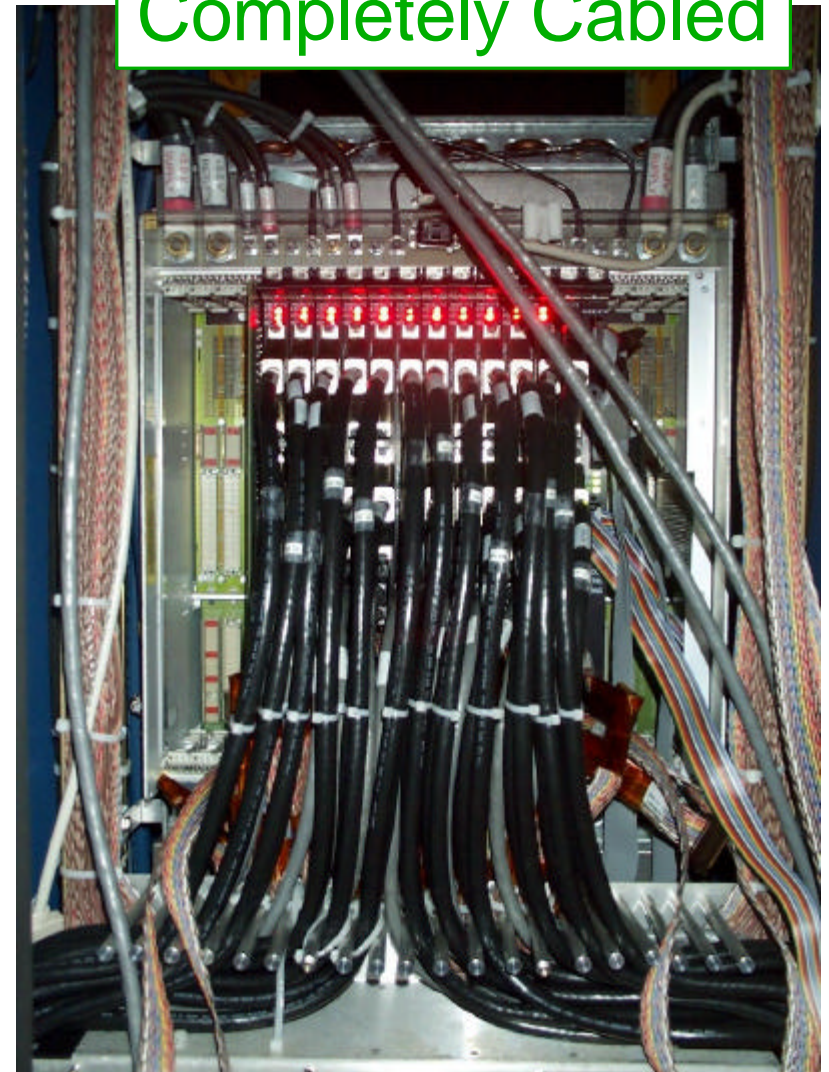 - ✓ Will need more Myron mode running to complete timing

Full Set of 12 Data Boards

Completely Cabled

Level 1 Triggers for 36x36

Expand on 1x8_End Table:

- **Calorimeter**
  - ➤ Low Pt Track (1.5 GeV) – no CLC
  - ➤ Low Pt Electron – no CLC
  - ➤ Low Et Photon – no CLC
  - ➤ Low Et Plug Photon
  - ➤ Dijet – CLC?
  - ➤ SUMET – CLC?
  - ➤ MET – CLC?
  - ➤ Add medium and high Et/PT Electron, Track, Jet, Photon to test using more of the bits – use 4 track thresholds

- **Need luminosity estimates to set thresholds!**

Level 1 Triggers for 36x36

- **Muon Triggers**
  - Low Pt Stub * CLC with Prescale of 100
  - Low Pt Stub + Low Pt Track – no prescale, no clc
  - Low Pt Track (no Stub, no clc, no prescale)
  - Dimuon: Low Pt Stub + Track
  - Add 2nd Pt Threshold
  - Add triggers w/CMP, CSP, CMX in tagging (currently PreFRED bits but not FRED)
- **Keep CLC minimum Bias**
- **Add BSC (needs timing in)**
  - East and West Gap Triggers
  - Minimum-bias trigger (East&West)

Triggers for Commissioning Level 2

- **Have L2 Triggers for:**
  - ✓ SUMET
  - ✓ MET
  - ➤ Clustering
    - Jets
    - Electrons (EM only pass)
- **Start in Tagging only**
  - ➤ L3 uses L1 bits
  - ➤ Test L3 using L2 bits?
- **Go to cutting at least for tests**
  - ➤ L3 with L1 or L2 bits
- **Table to use different rate capabilities (L2 Torture Test?)**
  - ➤ High L1 Rate – 10-30kHz
  - ➤ Lower L2 Rate – 50-100Hz
  - ➤ Easy with low SUMET at L1 and high at L2
  - ➤ We want test this on cosmics this next week
- **Question: will we have any running with L3 cutting?**